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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,463	07/03/2003	Eldad Zeira	I-2-0454.1US	6758

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EXAMINER

VUONG, QUOCHIE B

ART UNIT PAPER NUMBER

2618

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/613,463	ZEIRA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Quochien B. Vuong	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,11-14,17-22,25 and 26 is/are rejected.
- 7) ☐ Claim(s) 3-10,15,16,23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 13, 14, 18-22 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Filipovic (US 6,868,263).

Regarding claim 13 and 21, Filipovic discloses a receiver (figures 3 and 5) having an automatic gain control (49), said receiver for use in a time-slotted communications system (column 4, lines 8-40), comprising: initializing means for initializing an automatic gain control loop (when start of the gain control loop; column 10, line 59- column 11, line 3); sampling means for sampling a received signal (column 7, lines 7-12; column 8, lines 42-48); estimating means for estimating the power of the received signal (column 9, lines 28-31); comparison means for comparing the estimated power of the received signal with a reference power level (column 9, lines 32-42); generating means for generating an error signal based upon the difference between the estimated power and the reference power level (column 9, lines 40-46); accumulating means for accumulating the error signals generated by a plurality of received signals, said accumulating means storing an accumulated value (column 9, lines 52-55); and lookup

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means for looking up the accumulated value in a table to locate a control word for an attenuator, said control word used to adjust the gain of said attenuator (column 9, line 55-60).

As to claims 14 and 22, Filipovic discloses wherein said initializing means includes second initializing means for initializing said accumulating means with an initial value; and setting means for setting the gain of said attenuator (column 10, line 59-column 11, line 3).

As to claim 18, Filipovic discloses wherein said accumulating means includes an accumulator (figure 5, item 60; column 9, lines 52-60).

As to claims 19 and 26, Filipovic discloses storing means for storing the accumulated value (column 9, line 55).

As to claim 20, Filipovic discloses wherein said storing means includes a memory (column 9, line 55).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 11, 12, 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filipovic.

Regarding claim 1, Filipovic discloses a method for automatic gain control for a wireless transmit and receive unit (WTRU) (figures 3 and 5) in a time-slotted communications system (column 4, lines 8-40), the WTRU receiving a signal, the method comprising the steps of: (a) initializing an automatic gain control loop (when start of the gain control loop; column 10, line 59- column 11, line 3); (b) sampling the received signal with an analog-to-digital converter (ADC) (column 7, lines 7-12; column 8, lines 42-48); (c) estimating the power of the received signal (column 9, lines 28-31); (d) comparing the estimated power of the received signal with a reference power level (column 9, lines 32-42); (e) generating an error signal based upon the difference between the estimated power and the reference power level (column 9, lines 40-46); (f) accumulating the error signals generated by a plurality of received signals in an accumulator; (g) looking up the accumulator value in a table to locate a control word for an attenuator (column 9, lines 52-55); (h) passing the control word to the attenuator to adjust the gain (column 9, lines 52-55); and if not inherent would be obvious (i)

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repeating steps (c) through (h) for a predetermined number of iterations (since using the accumulator for accumulate a plurality of values).

As to claim 2, Filipovic discloses wherein the initializing step includes the steps of: initializing the accumulator; and setting the gain of the attenuator (column 10, line 59- column 11, line 3).

As to claim 11, Filipovic does not specifically disclose the comparator is a log comparator. However, examiner takes Official notice that a log comparator is well known in the art. Therefore, it would have been obvious to adapt a log comparator to the receiver of Filipovic.

As to claim 12, Filipovic disclose the steps of: (j) storing the accumulator value for the current slot in a memory; and (k) applying the previously set gain for the remainder of the slot (column 9, line 55- column 10, line 9)

As to claims 17 and 25, Filipovic disclose the receiver of claims 13 and 21 above, respectively. Filipovic does not specifically disclose the comparator is a log comparator. However, examiner takes Official notice that a log comparator is well known in the art. Therefore, it would have been obvious to adapt a log comparator to the receiver of Filipovic in order to compare the signals in term of dB.

### ***Allowable Subject Matter***

6. Claims 3-10, 15, 16, 23 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, Filipovic disclose the method of claim 2 above. However, Filipovic fails to teach wherein the initializing step further includes the step of determining whether the current slot has previously been active prior to initializing the accumulator, if the current slot has previously been active then the accumulator is initialized to a first value, and if the current slot has not previously been active then the accumulator is initialized to a second value.

Regarding claim 8, Filipovic disclose the method of claim 2 above. However, Filipovic fails to teach wherein the setting step includes searching a second lookup table with the value of the accumulator to find a second control word for the attenuator.

Regarding claim 9, Filipovic disclose the method of claim 1 above. However, Filipovic fails to teach wherein the estimating step includes skipping the first few samples immediately following the gain adjustment.

Regarding claim 10, Filipovic disclose the method of claim 1 above. However, Filipovic fails to teach wherein the estimating step includes using a third lookup table to correct the estimate if the ADC is clipping.

Regarding claims 15 and 23, Filipovic disclose the receiver of claim 13 and 21 above, respectively. However, Filipovic fails to teach wherein said setting means includes second lookup means for looking up the initial value in a second table to locate a second control word for said attenuator, said second control word used to adjust the gain of said attenuator.

Regarding claims 16 and 24, Filipovic disclose the receiver of claim 13 and 21 above, respectively. However, Filipovic fails to teach wherein said sampling means

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includes an analog-to-digital converter (ADC); and said estimating means includes third lookup means for looking up a correction factor if said ADC is clipping.

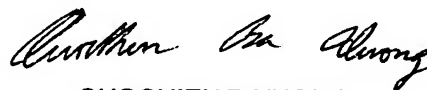
### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quochien B. Vuong  
Apr. 30. 2006.



**QUOCHIEN B. VUONG  
PRIMARY EXAMINER**